



## WORKING HOURS ARRANGEMENTS, AUSTRALIA, FEBRUARY TO MAY 1981 (PRELIMINARY)

NEW ISSUE

**PHONE INQUIRIES** *for more information about these statistics*—contact Mr Geoff Winter on Canberra (062) 52 6576 or any of our State offices.  
*other inquiries including copies of publications*—contact Information Services on Canberra (062) 52 6627 or in any of our State offices.

**MAIL INQUIRIES** *write to* Information Services, ABS, P.O. Box 10, Belconnen, A.C.T. 2616 or any of our State offices.

### MAIN FEATURES

A special survey was conducted from February to May 1981 in order to obtain information about the different types of working patterns of employed persons. Preliminary results of this survey indicate that:

About 1 in 12 (421,000) employed wage and salary earners (employees) were night workers (as defined in paragraph 5);

About 1 in 12 (427,000) employees were shiftworkers (as defined in paragraph 7) of whom about half (219,000) were also nightworkers, and about two-thirds (263,000) worked three or more different shifts;

About one-quarter (22 per cent) of nightworkers usually worked 49 hours or more in their main job each week;

Of employees who were not shiftworkers, about 1 in 6 regularly worked at some time during weekends and about 1 in 50 usually worked on every day of the week.

### EXPLANATORY NOTES

#### Introduction

During the period February to May 1981 a survey was conducted throughout Australia in order to obtain information about the nature and extent of various disabilities and handicaps in the Australian community, and about the different types of working patterns of employed persons. Persons defined as 'handicapped' (see *Survey of Handicapped Persons, Australia, February to May 1981 (Preliminary)* (4342.0)) were not asked some of the questions relating to working patterns and this publication does not contain any estimates including those persons. However, a limited amount of data about working hours arrangements of handicapped persons will be included in the final publication. The final publication will also contain other estimates in greater detail, and information not contained here, including some data for employers and self-employed persons, hours worked in 'second' jobs and other information.

2. A survey of evening and night work, and work patterns of employees, was conducted in November 1976. Results were published in *Work Patterns of Employees, November 1976* (6328.0) and *Evening and Night Work, November 1976* (6329.0). The results contained in these publications are not directly comparable with the results in the following tables, as information obtained in the November 1976 survey was less extensive and differently defined.

3. The survey was based on a multi-stage area sample of private dwellings (about 30,000 houses, flats, etc.) and non-private dwellings (hotels, motels, etc.) and covered about two thirds of one per cent of the population in Australia. Information was obtained from the occupants of selected dwellings by carefully chosen and specially trained interviewers. Some data obtained related only to the four weeks prior to the interviews, which commenced on 2 February 1981.

#### Scope

4. The survey results contained in this publication relate to all non-handicapped persons aged fifteen years and over except:

- (a) members of the permanent defence forces;
- (b) certain diplomatic personnel of overseas governments, customarily excluded from census and estimated populations;
- (c) overseas visitors holidaying in Australia;
- (d) members of non-Australian defence forces (and their dependants) stationed in Australia;
- (e) boarding school students, some patients in hospitals and sanatoria, or inmates of gaols, reformatories, etc.

#### Definitions

5. A *night worker* was defined as an employed wage or salary earner (i.e. an employee) who in any one of the four weeks prior to the survey date worked a total of 15 hours or more between 7.00 pm and 7.00 am in their main job. Employees who worked these hours in all jobs combined but not in their main job were not classified as nightworkers. ('Main job' was defined as the job in which respondents usually worked the most hours.)

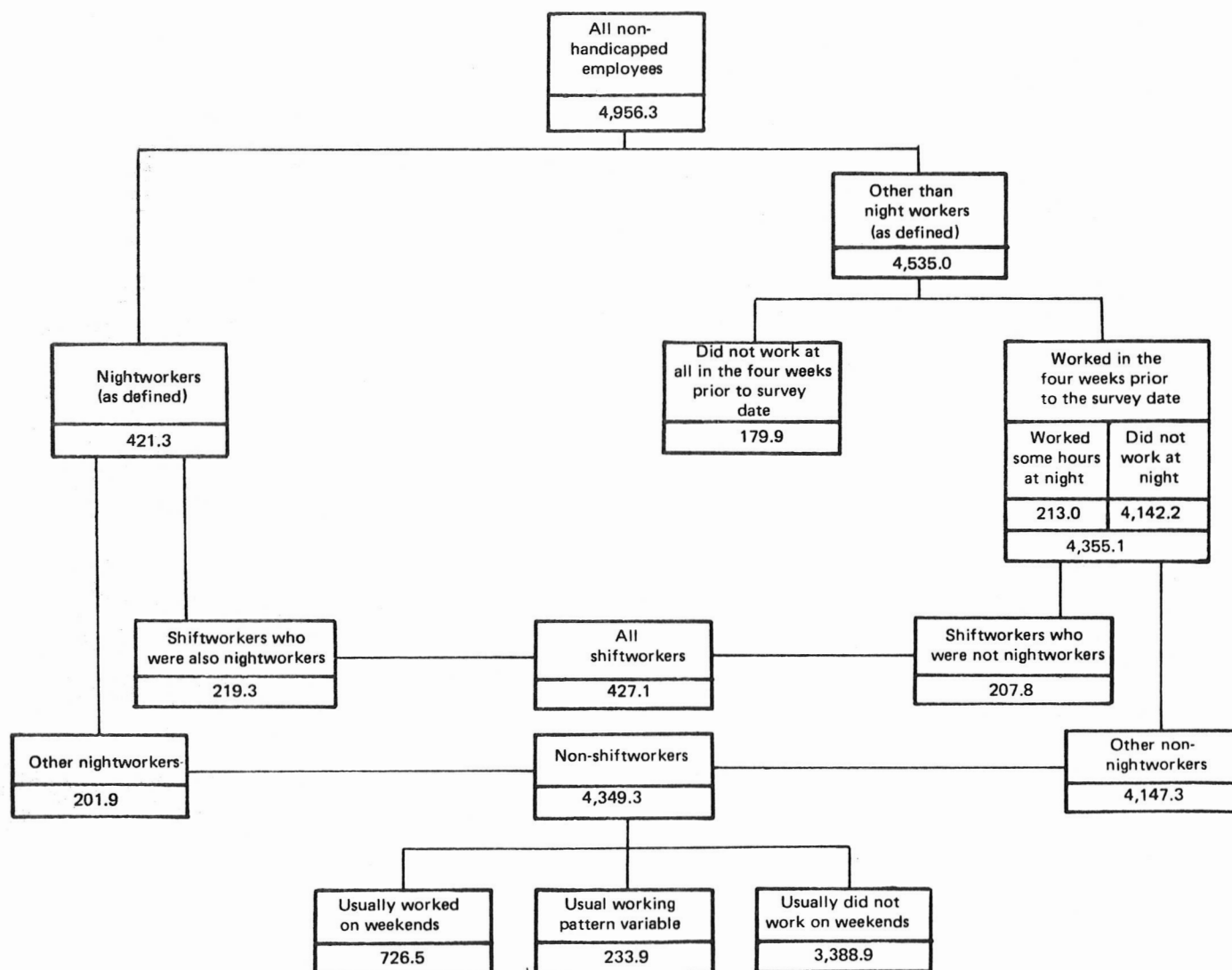
6. Employees *other than night workers* (i.e. 'day' workers) were, therefore, persons who did not work the hours described in 5 above in their main job.

7. *Shiftworkers* were employees who in the four weeks prior to the date of the interview worked two or more different work shifts; for the purposes of this survey, work shifts were two or more distinct periods of work within a 24-hour day between which employees were regularly rotated. Typically the periods of time covered by the work shifts operating in any given establishment or workshop vary appreciably and often do not overlap with each other. Persons who worked fixed hours, i.e. those who did not work rotating shifts whether during the day or at night, were not classified as shiftworkers. Persons who, in establishments working several 'shifts', worked the 'night shift' only were, therefore, not classified as shiftworkers but were generally classified as nightworkers.

8. *Weekend workers* were employees who usually worked at some time on either Saturdays or Sundays (or both), in their main job. However, those persons for whom any regular working period ended early on Saturday morning or started late on Sunday night were generally not included as weekend workers.

9. It should be noted that some of these groups of employees are not necessarily mutually exclusive and the same data have not been obtained for all of them, e.g. employees who worked rotating shifts were not asked whether they worked on weekends. The inter-relationships between the various groups are shown in the following diagram. This diagram indicates that the questionnaire used in the survey first established respondents' night work status, then their shiftwork status and, for those respondents who were not deemed to be shiftworkers, the days on which they usually worked.

**ALL NON-HANDICAPPED EMPLOYEES : TYPE OF WORK PATTERNS EXPERIENCED ('000)**



### Classification of industry and occupation

10. Industry is classified according to the *Australian Standard Industrial Classification (ASIC) 1978* and occupation according to the *Classification and Classified List of Occupations, Revised June 1976*.

### Reliability of the estimates

11. Since the estimates are based on information obtained from occupants of a sample of dwellings they are subject to sampling variability; that is they may differ by chance from the figures that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error. There are about two chances in three that a sample estimate will differ by less than one standard error from the figure that would have been obtained if all dwellings had been included in the survey, and about nineteen chances in twenty that the difference will be less than two standard errors. Another measure of the likely difference is the relative standard error which is obtained by expressing the standard error as a percentage of the estimate.

12. A table of standard errors for estimates of numbers of employees is given below. Although this publication does not include any percentages, users may be interested in standard errors for any they may wish to calculate themselves. The reliability of an estimated percentage computed by using sample data for both numerator and denominator depends upon both the size of the numerator and the size of the denominator. The relative standard error of an estimated percentage can be approximated by the relative standard error of the numerator, which may be obtained from the table below. The relative standard error for large percentage estimates (greater than 50 per cent) will generally be lower than the relative standard error of the estimate of the numerator.

13. Some very small estimates are subject to such high relative standard errors as to detract seriously from their value for most reasonable uses. Although figures for

these small components can in some cases be derived by subtraction, they should not be regarded as reliable. More information about this topic will be found in the final publication for this survey, to be released in the near future.

### Related publications

14. Other ABS publications which may be of interest include:

*The Labour Force, Australia (6203.0)-issued monthly*

*Work Patterns of Employees, Australia, November 1976 (6328.0)*

*Evening and Night Work, Australia, November 1976 (6329.0)*

*Working Conditions, Australia, February to May 1979 (6335.0)*

15. Current publications produced by the ABS are listed in the *Catalogue of Publications, Australia (1101.0)*. The ABS also issues, on Tuesdays and Fridays, a *Publications Advice (1105.0)* which lists publications to be released in the next few days. The Catalogue and Publications Advice are available from any ABS office.

### Symbols and other usages

\* Subject to sampling variability too high for most practical uses. See paragraphs 11 to 13.

16. Figures have been rounded and discrepancies may occur between sums of the component items and totals.

**R. J. CAMERON**  
Australian Statistician

### STANDARD ERRORS OF ESTIMATES

Size of estimate (persons)	Approximate standard error of estimates		Size of estimate (persons)	Approximate standard error of estimate	
	Persons	Per cent of estimate		Persons	Per cent of estimate
3,000	800	26.5	50,000	2,900	5.8
3,500	860	24.6	100,000	3,900	3.9
4,000	920	23.0	200,000	5,100	2.6
4,500	970	21.6	300,000	6,000	2.0
5,000	1,000	20.0	500,000	7,200	1.4
6,000	1,100	18.0	1,000,000	9,100	0.9
10,000	1,400	14.0	2,000,000	11,000	0.6
20,000	2,000	10.0	5,000,000	15,000	0.3



TABLE 1. ALL EMPLOYEES : OCCUPATION, MARITAL STATUS AND WHETHER NIGHT WORKER

Occupation group	('000)								
	Night worker			Other worker			Total		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
<b>MARRIED</b>									
Professional, technical, etc.	21.0	26.1	47.1	270.3	201.1	471.4	291.3	227.2	518.5
Administrative, executive and managerial	12.0	*	12.5	166.4	15.2	181.6	178.4	15.6	194.0
Clerical	6.7	3.6	10.3	177.2	338.1	515.3	183.9	341.7	525.6
Sales	4.7	*	4.9	113.2	92.7	206.0	117.9	92.9	210.9
Farming, fishing, timber-getting, etc.	3.7	*	3.8	58.1	12.8	70.9	61.8	12.9	74.7
Mining and quarrying	9.6	*	9.7	16.6	*	17.0	26.2	*	26.7
Transport and communication	32.0	3.2	35.2	120.6	20.9	141.5	152.7	24.1	176.7
Trades and production-process workers and labourers, n.e.c.	90.5	12.6	103.1	701.7	131.9	833.6	792.2	144.5	936.7
Service, sport and recreation	40.1	15.4	55.5	91.9	189.7	281.6	132.0	205.1	337.1
<b>Total</b>	<b>220.3</b>	<b>61.8</b>	<b>282.1</b>	<b>1,716.0</b>	<b>1,002.8</b>	<b>2,718.9</b>	<b>1,936.3</b>	<b>1,064.6</b>	<b>3,000.9</b>
<b>NOT MARRIED(a)</b>									
Professional, technical, etc.	10.1	22.3	32.4	106.1	150.7	256.9	116.2	173.1	289.3
Administrative, executive and managerial	*	*	3.6	23.6	10.0	33.7	26.4	10.9	37.3
Clerical	3.6	*	5.4	117.6	335.9	453.4	121.1	337.7	458.8
Sales	*	*	*	80.1	117.3	197.3	81.9	118.0	199.9
Farming, fishing, timber-getting, etc.	*	*	*	55.5	7.8	63.3	58.2	7.8	66.0
Mining and quarrying	3.0	*	3.1	7.0	*	7.0	10.0	*	10.1
Transport and communication	14.7	*	17.1	49.9	14.3	64.2	64.6	16.7	81.3
Trades and production-process workers and labourers, n.e.c.	33.4	*	35.7	506.0	65.6	571.6	539.4	67.9	607.3
Service, sport and recreation	23.9	12.6	36.5	62.6	106.2	168.8	86.5	118.8	205.3
<b>Total</b>	<b>95.9</b>	<b>43.2</b>	<b>139.2</b>	<b>1,008.4</b>	<b>807.8</b>	<b>1,816.2</b>	<b>1,104.3</b>	<b>851.0</b>	<b>1,955.3</b>
<b>TOTAL</b>									
Professional, technical, etc.	31.1	48.5	79.5	376.5	351.8	728.3	407.5	400.3	807.8
Administrative, executive and managerial	14.8	*	16.1	190.0	25.2	215.2	204.8	26.6	231.4
Clerical	10.3	5.4	15.7	294.8	674.0	968.8	305.0	679.4	984.4
Sales	6.5	*	7.5	193.3	210.0	403.3	199.8	211.0	410.8
Farming, fishing, timber-getting, etc.	6.4	*	6.5	113.6	20.6	134.2	120.0	20.7	140.7
Mining and quarrying	12.6	*	12.8	23.6	*	24.0	36.1	*	36.8
Transport and communication	46.7	5.6	52.3	170.6	35.1	205.7	217.3	40.7	258.0
Trades and production-process workers and labourers, n.e.c.	123.9	14.8	138.8	1,207.6	197.6	1,405.2	1,331.6	212.4	1,544.0
Service, sport and recreation	64.0	28.0	92.0	154.5	295.9	450.4	218.5	323.9	542.4
<b>Total</b>	<b>316.3</b>	<b>105.0</b>	<b>421.3</b>	<b>2,724.4</b>	<b>1,810.6</b>	<b>4,535.0</b>	<b>3,040.7</b>	<b>1,915.6</b>	<b>4,956.3</b>

(a) Includes never married, divorced, widowed and permanently separated.

**TABLE 2. ALL EMPLOYEES (EXCLUDING SHIFTWORKERS)(a) : DAYS IN WEEK USUALLY WORKED  
AND HOURS USUALLY WORKED IN MAIN JOB EACH WEEK  
(<sup>'000</sup>)**

Days in week usually worked	Hours usually worked in main job							Total
	Less than 20 hours	20 and less than 30 hours	30 and less than 35 hours	35 and less than 40 hours	40 hours	41 hours and over	Variable hours	
MALES								
Every day	*	*	*	*	7.4	55.5	9.9	75.0
Six days—								
Monday to Saturday	3.0	*	*	7.3	61.6	199.2	10.9	284.6
Total	3.2	*	*	7.7	64.5	216.2	13.0	308.3
Five days—								
Monday to Friday	3.8	9.2	19.3	350.1	1,204.7	429.2	46.3	2,062.6
Total	3.8	10.2	20.4	352.5	1,223.4	438.9	46.7	2,096.0
Four days or less	43.7	7.3	5.4	4.5	7.3	*	*	73.2
Variable	7.6	4.7	3.5	14.5	29.2	23.4	19.0	101.9
Total	58.3	24.1	32.2	380.3	1,331.9	736.6	91.2	2,654.6
Weekend workers(b)	31.2	6.1	4.9	11.5	91.6	282.4	24.8	452.6
Saturday only(b)	26.6	3.1	3.3	8.7	69.9	203.4	11.8	326.9
Sunday only(b)	*	*	*	*	6.8	13.0	*	25.9
Saturday and Sunday(b)	*	*	*	*	14.9	66.0	11.6	99.8
Other than weekend workers(c)	19.5	13.3	23.8	354.3	1,211.0	430.8	47.4	2,100.2
FEMALES								
Every day	*	*	*	*	4.1	10.2	*	22.0
Six days—								
Monday to Saturday	3.6	7.0	3.6	6.7	42.8	28.8	*	93.8
Total	4.3	8.4	3.9	6.9	44.2	31.7	*	101.2
Five days—								
Monday to Friday	36.0	79.6	55.0	299.9	548.2	93.0	7.3	1,119.1
Total	38.5	84.5	57.9	301.9	572.6	97.3	8.7	1,161.5
Four days or less	189.7	56.7	14.2	3.3	5.0	*	8.6	278.0
Variable	37.2	18.9	5.4	6.3	27.0	5.7	31.5	132.0
Total	272.4	170.4	81.8	319.1	652.9	145.5	52.6	1,694.6
Weekend workers(b)	94.0	30.3	10.6	10.0	74.4	46.3	8.2	273.8
Saturday only(b)	67.0	18.7	7.0	8.7	52.7	31.0	3.5	188.6
Sunday only(b)	8.0	3.6	*	*	5.6	3.2	*	21.9
Saturday and Sunday(b)	18.9	8.0	*	*	16.1	12.1	4.5	63.3
Other than weekend workers(c)	141.1	121.3	65.7	302.8	551.5	93.5	12.8	1,288.7
PERSONS								
Every day	*	*	*	*	11.5	65.7	11.8	97.0
Six days—								
Monday to Saturday	6.6	7.6	5.7	13.9	104.3	227.9	12.3	378.4
Total	7.5	9.8	6.2	14.5	108.7	247.9	14.8	409.5
Five days—								
Monday to Friday	39.8	88.8	74.4	650.0	1,752.9	522.2	53.6	3,181.6
Total	42.3	94.7	78.3	654.5	1,796.1	536.3	55.4	3,257.5
Four days or less	233.4	64.0	19.6	7.7	12.3	3.2	11.2	351.2
Variable	44.8	23.6	8.9	20.8	56.3	29.0	50.5	233.9
Total	330.7	194.6	113.9	699.4	1,984.8	882.1	143.7	4,349.3
Weekend workers(b)	125.2	36.4	15.5	21.6	166.1	328.7	33.0	726.5
Saturday only(b)	93.7	21.8	10.4	17.4	122.6	234.4	15.3	515.5
Sunday only(b)	10.3	4.3	*	*	12.5	16.2	*	47.8
Saturday and Sunday(b)	21.3	10.4	3.8	*	31.0	78.2	16.1	163.2
Other than weekend workers(c)	160.6	134.6	89.5	657.1	1,762.5	524.3	60.3	3,388.9

(a) Excludes employees who did not work during the four weeks prior to the survey date. (b) Includes employees who also worked on one or more weekdays but excludes those who worked on a varying number of days each week. (c) Excludes employees who worked on a varying number of days each week.

**TABLE 3. EMPLOYEES WHO WERE NIGHTWORKERS : AGE AND USUAL HOURS WORKED IN MAIN JOB EACH WEEK ('000)**

	Usual hours worked in main job						
Age group (years)	Less than 35 hours	35 and less than 40 hours	40 hours	41 and less than 49 hours	49 hours and over	Variable hours	Total
MALES							
15-24	4.0	3.3	25.8	11.0	13.3	4.5	62.1
25-34	} 3.8 {	6.9	36.0	21.2	30.9	7.9	105.6
35-44		6.3	26.9	13.8	20.0	4.5	72.6
45-54	*	5.0	19.3	9.1	13.6	4.0	52.3
55 and over	*	*	11.4	5.0	3.9	*	23.8
Total	9.5	24.0	119.4	60.1	81.6	21.6	316.3
FEMALES							
15-24	5.0	} 4.5 {	18.9	*	*	*	31.4
25-34	10.5		13.5	4.3	3.6	*	35.6
35-44	6.8	} 3.0 {	10.2	} *	4.8	} *	23.9
45 and over	3.3		5.6				14.0
Total	25.5	7.5	48.2	9.9	10.4	3.5	105.0
PERSONS							
15-19	*	*	14.8	*	3.6	*	24.7
20-24	6.6	4.4	29.9	11.8	11.7	4.3	68.8
25-34	13.1	9.5	49.5	25.5	34.5	9.1	141.2
35-44	7.9	8.4	37.1	15.5	22.8	4.8	96.5
45-54	3.7	5.6	23.8	10.0	15.1	4.9	63.2
55 and over	*	*	12.5	5.2	4.3	*	26.9
Total	35.0	31.4	167.6	70.1	92.1	25.1	421.3

**TABLE 4. EMPLOYEES WHO WERE SHIFTWORKERS(a) : FREQUENCY OF CHANGE IN SHIFTS, HOURS WORKED EACH SHIFT AND NUMBER OF DIFFERENT SHIFTS WORKED ('000)**

	Hours worked each shift				
Frequency of change in shifts	Under 8 hours	8 hours	9 hours and over	Variable hours	Total
2 SHIFTS					
Every day	4.1	13.4	*	} 3.9 {	20.0
2-6 days	3.3	19.4	7.4		33.1
7 days	7.9	45.3	8.6	3.2	65.1
8-14 days	*	15.4	4.1	} 3.3 {	22.7
15 days or more	3.8	13.8	4.2		23.6
Total	21.0	107.4	25.7	10.4	164.5
3 SHIFTS OR MORE					
Every day	8.6	31.9	6.5	8.8	55.8
2-6 days	6.1	34.7	4.8	3.3	48.8
7 days	10.6	95.1	6.6	6.4	118.7
8-14 days	} 3.4 {	10.7	} 5.1 {	} 3.0 {	15.5
15 days or more		17.2			23.8
Total	28.6	189.6	23.0	21.4	262.7
TOTAL					
Every day	12.7	45.4	7.9	9.9	75.9
2-6 days	9.4	54.2	12.2	6.1	81.9
7 days	18.5	140.4	15.3	9.5	183.8
8-14 days	3.1	26.0	6.9	*	38.2
15 days or more	5.9	30.9	6.4	4.2	47.4
Total	49.6	296.9	48.8	31.8	427.1

(a) Excludes employees who did not work during the four weeks prior to the survey date.

**TABLE 5. EMPLOYEES WHO WERE 'DAY' WORKERS(a) : USUAL STARTING TIME,  
USUAL FINISHING TIME AND MARITAL STATUS  
(<sup>'000</sup>)**

			Usual finishing time							Variable	Total
			Midnight and before noon	Noon and before 3.00 pm	3.00 pm and before 4.00 pm	4.00 pm and before 5.00 pm	5.00 pm and before 6.00 pm	6.00 pm and before 7.00 pm	7.00 pm and before midnight		
Usual starting time											
MARRIED											
7.00 am and before 7.30 am			3.9	15.2	144.4	113.4	36.3	17.4	9.2	8.7	348.6
7.30 am	..	8.00 am	*	6.4	31.0	309.4	54.0	15.7	4.5	5.7	428.2
8.00 am	..	8.30 am	*	13.5	21.2	246.7	211.8	37.8	7.8	10.7	551.7
8.30 am	..	9.00 am	*	13.2	44.7	107.2	233.0	27.9	5.2	10.2	443.4
9.00 am	..	12 noon	5.7	53.2	56.0	44.2	173.8	30.4	17.9	14.1	395.2
12 noon	..	7.00 pm	*	*	*	4.3	7.5	5.2	39.8	*	63.4
7.00 pm	..	7.00 am	13.9	36.4	34.8	19.0	20.0	14.6	10.9	8.8	158.4
Variable			*	*	*	*	*	*	*	89.0	96.4
Total			31.3	139.2	335.1	845.4	739.2	149.5	96.7	149.0	2,485.3
NOT MARRIED(b)											
7.00 am and before 7.30 am			*	6.8	87.8	64.4	22.8	8.5	5.5	5.5	203.1
7.30 am	..	8.00 am	*	4.7	18.1	203.2	27.7	7.3	*	4.6	268.7
8.00 am	..	8.30 am	*	9.8	10.1	179.8	151.9	13.7	3.4	6.5	376.2
8.30 am	..	9.00 am	*	7.5	19.5	89.9	202.9	12.3	3.0	5.9	341.2
9.00 am	..	12 noon	*	17.5	14.5	25.9	161.8	25.6	12.4	4.6	264.3
12 noon	..	7.00 pm	*	*	*	*	6.1	6.4	35.5	*	54.2
7.00 pm	..	7.00 am	9.7	18.1	19.1	9.2	6.8	6.2	8.0	4.5	81.7
Variable			*	*	*	*	*	*	*	69.4	72.7
Total			16.7	64.8	169.8	576.0	581.2	80.1	70.8	102.5	1,662.1
TOTAL											
7.00 am and before 7.30 am			5.6	22.0	232.2	177.8	59.2	25.9	14.7	14.2	551.6
7.30 am	..	8.00 am	*	11.2	49.1	512.6	81.8	23.0	6.7	10.3	696.8
8.00 am	..	8.30 am	3.3	23.3	31.2	426.6	363.6	51.6	11.1	17.1	927.9
8.30 am	..	9.00 am	*	20.7	64.2	197.1	435.9	40.2	8.2	16.1	784.6
9.00 am	..	12 noon	7.6	70.7	70.5	70.1	335.5	56.0	30.3	18.7	659.5
12 noon	..	7.00 pm	3.1	*	*	6.6	13.6	11.6	75.4	3.5	117.6
7.00 pm	..	7.00 am	23.6	54.5	53.9	28.3	26.8	20.8	19.0	13.3	240.2
Variable			*	*	*	*	4.0	*	*	158.4	169.1
Total			47.9	204.0	504.9	1,421.4	1,320.4	229.7	167.5	251.5	4,147.3

(a) Excludes nightworkers as defined and employees who worked rotating shifts. Also excludes employees who did not work during the four weeks prior to the survey date.  
(b) Includes never married, divorced, widowed and permanently separated.

